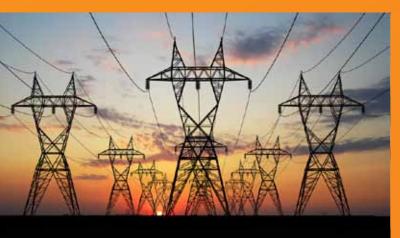


## A 21st Century Solution to Cable Condition Discovery and Repair in the Electrical Industry







SSTDR technology will change the way you fix cable quality issues on installed cabling systems

### **Electrical Construction/Maintenance and Power Utility Applications for Spread Spectrum TDR technology**

#### T3 INNOVATION IS PROUD TO INTRODUCE THE BIGGEST ADVANCEMENT IN TDR TECHNOLOGY IN 30 YEARS!

U.S. conceived and designed technology that will, forever, change the way technicians, contractors and installers work on cable problems in residences, factories and in the field. All cables, all sizes, all types!!!



#### **Works over Live Wires!**

The most dramatic capability of the many that SSTDR exhibits is its ability to work on live energized wires and circuits. It can measure for faults like live Arc Faults or Shorts WHILE the cable is energized. Whether it is data, voice, current or voltage, SSTDR technology will show cable segment length and what, if anything, is attached to the line or impedes the cable's desired performance. For the first time systems do not have to be taken down or work interrupted to check cable run lengths or determine fault conditions, whether on-going or intermittent.

# Patented Spread Spectrum Time Domain Reflectometry (SSTDR) technology is an entirely new, revolutionary way to see down a cable to determine a location of a fault, a condition that is not clear from either end or just of finding the true accurate length of a specific conductor pair whether installed or on reels. SSTDR not only allows for a highly accurate short and long range, up to 30 km, length measurements but it exhibits unique properties and capabilities that no other TDR technology can accomplish.

**SSTDR** is now being implemented in the most advanced Aerospace and Military avionics environments to do jobs that are not possible with old TDR designs. T3 brings this cutting edge science to the commercial world of electrical construction, maintenance, and power utility applications.



### A Whole New Class of TDR Testing Instruments

Dynamic TDR measurements are those taken live and while a cable is energized. T3 Innovation is presently designing testers for this new class of TDR applications. Dynamic TDR's will do things not presently possible on existing TDR's. For instance, the ability to "monitor" a live cable waiting for an intermittent fault to appear like a Arc Fault can now be done easily and with both handheld equipment or embedded specially designed communications modules, which we have dubbed MOLES (Monitoring Over Live Energized Systems). Check length and get voltage/current readings over time or at precise increments. Data log cable conditions during times of stress or heavy duty loads. The possibilities are endless!

**Theft alert.** Monitoring modules can be designed to be embedded and powered in an electrical system to alert the owner of any tampering or unauthorized disconnection that may occur. Street lighting, isolated cable runs or any copper based cabling system that could be the target of cable thieves can now be 100% protected.

Buried Cable Fault location capabilities. Buried cable faults can now be determined while the cable is energized and without damaging its integrity any further with the use of "thumpers". Separate remote modules can be designed to triangulate faults more precisely than ever before in residential or industrial electrical systems that work in conjunction with handheld tester and data harvesting tester units.

### Long or Short Cable Lengths Shown Accurately

Unlike other TDR technologies Spread Spectrum TDR does not have "dead" spots or length limitations that have to be overcome with adjusting the impedance limits of every cable or setting range subsections. Any length in any cable environment can be accommodated and will result in accuracies of 1% or better. This makes finding the fault or section of the cable of interest easy, fast and with the utmost certainty. Limitations are only in the imagination with this new technology



### **Unparalleled Sensitivity for Non-Contact Cable Testing**

SSTDR technology is so sensitive that it can make length and fault measurements THRU conductor insulation using specially designed cable clamps that do not physically touch the conductors. Now cables carrying power in factories can be characterized from any point, the middle or either end, without having to shut down the lines or cut into the insulation or taking down a production line or power system that has sensitive equipment attached to it.

Combining the SSTDR Technology with the ability to make electrical measurements in a non-contact method, while the conductors are carrying current, will make it safer and more convenient than ever before!

### T3 INNOVATION IS CREATING NEW AND EXCITING PRODUCTS



T3 Innovation is working with companies to design, commercialize and market innovative test and measurement equipment that utilize all of the new capabilities of SSTDR technology and will fundamentally alter the way cables are now measured and repaired.

We invite anyone with a wire and cable application that needs unique and innovative approaches to give us a call or contact us via email and explain your needs to see how we can help.

Spread Spectrum Time Domain Reflectometry is the 21st century solution to cable measurement and condition problems.









